INFORMATION TO OFFERORS OR QUOTERS **SECTION A - COVER SHEET**

1. SOLICITATION NUMBER 2. (X one) a. SEALED BID X b. NEGOTIATED (RFP) N00173-99-R-MS01 c. NEGOTIATED (RFQ)

INSTRUCTIONS

NOTE THE AFFIRMATIVE ACTION REQUIREMENT OF THE EQUAL OPPORTUNITY CLAUSE WHICH MAY APPLY TO THE CONTRACT RESULTING FROM THIS SOLICITATION.

You are cautioned to note the "Certification of Non-Segregated Facilities" in the solicitation. Failure to agree to the certification will render your reply nonresponsive to the terms of solicitations involving awards of contracts exceeding \$25,000 which are not exempt from the provisions of the Equal Opportunity clause.

"Fill-ins" are provided on the face and reverse of Standard Form 18 and Parts I and IV of Standard Form 33, or other solicitation documents and Sections of Table of Contents in this solicitation and should be examined for applicability.

See the provision of this solicitation entitled either "Late Bids, Modifications of Bids or Withdrawal of Bids" or "Late Proposals, Modifications of Proposals and Withdrawals of Proposals.'

When submitting your reply, the envelope used must be plainly marked with the Solicitation Number, as shown above and the date and local time set forth for bid opening or receipt of proposals in the solicitation document.

If NO RESPONSE is to be submitted, detach this sheet from the solicitation, complete the information requested on reverse, fold, affix postage, and mail. NO ENVELOPE IS NECESSARY.

Replies must set forth full, accurate, and complete information as required by this solicitation (including attachments). The penalty for making false statements is prescribed in 18 U.S.C. 1001.

| 3. | ISSUING | OFFICE | (Complete | mailing | address, | including | ZIP | Code) | |
|----|---------|---------------|-----------|---------|----------|-----------|-----|-------|--|
|----|---------|---------------|-----------|---------|----------|-----------|-----|-------|--|

CONTRACTING OFFICER

NAVAL RESEARCH LABORATORY

ATTN: CODE 3220J.MS

WASHINGTON DC 20375-5326

4. ITEMS TO BE PURCHASED (Brief description)

THREE PROTOTYPE ELECTRIC LIGHTWEIGHT POWER MOTORS

| 5. P | ROCUREMENT INFORMATION | (X and complete as applicable) | |
|------|--|---------------------------------|---|
| X | a. THIS PROCUREMENT IS U | NRESTRICTED | |
| | b. THIS PROCUREMENT IS A this solicitation for details | | E FOLLOWING (X one). (See Section I of the Table of Contents in |
| | (1) Small Business | (2) Labor Surplus Area Concerns | (3) Combined Small Business/Labor Area Concerns |
| 6 4 | DOITIONAL INFORMATION | | |

The Naval Research Laboratory Contracting Division issues solicitations and amendments to solicitations electronically via the Internet at the following website: http://heron.nrl.navy.mil/contracts/home.htm.

Any amendments to this solicitation will be posted at that website. Amendments will not be distributed by any other means. It is the responsibility of potential offerors to periodically review the website for amendments to this solicitation.

| 7. POINT OF CONTACT FOR INFORMATION | |
|---|--|
| a. NAME (Last, First, Middle Initial) | b. ADDRESS (Include Zip Code) |
| SANDY, MARY M | NAVAL RESEARCH LABORATORY, CODE 3220J.MS |
| c. TELEPHONE NUMBER (Include Area Code and Extension) (NO | 4555 OVERLOOK AVE., SW |
| COLLECT CALLSI 202-767-3710 | WASHINGTON, DC 20375-5326 |

| 8. REASONS FOR NO RESPONSE (X all ti | hat apply) | · | | | | |
|--|----------------|-------------------------------------|---------------------------|-----------------------------|--|--|
| a. CANNOT COMPLY WITH SPECIF | | b. CANNOT MEET DELIVERY REQUIREMENT | | | | |
| c. UNABLE TO IDENTIFY THE ITEM | I(S) | d. DO NOT REGULAR | LY MANUFACTURE OR SELL TH | E TYPE OF ITEMS INVOLVED | | |
| e. OTHER (Specify) | | • | | | | |
| A AAN ING HOT INFORMATION OF | | | | | | |
| 9. MAILING LIST INFORMATION (X one) | DE DETAINED OF | LTUE MANUANC LICT FOR FI | THE PROPERTY OF THE | TYPE OF TIME OF THE OFFICE | | |
| YES NO WE DESIRE TO 10. RESPONDING FIRM | BE RETAINED OF | THE MAILING LIST FOR FO | UTURE PROCUREMENT OF THE | TYPE OF TIME(S) INVOLVED. | | |
| a. COMPANY NAME | | b. ADDRESS (Include | Zin Codel | | | |
| 3. 33 | | 3.7.03.1233 7.7.0333 | 2.5 0000, | | | |
| c. ACTION OFFICER | | | | | | |
| (1) Typed or Printed Name (Last, First, Middle Initial) | (2) Title | | (3) Signature | (4) Date Signed (YYMMDD) | | |
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| FROM | | | | AFFIX STAMP | | |

| SOLICITATION NUMBER | | | | | |
|---------------------|------------|--|--|--|--|
| N00173-99-R-MS01 | | | | | |
| DATE (YYMMDD) | LOCAL TIME | | | | |
| 990329 | 4:00 PM | | | | |

TO NAVAL RESEARCH LABORATORY CONTRACTING OFFICER CODE 3220J.MS 4555 OVERLOOK, AVE., SW WASHINGTON, DC 20375-5326 HERE

| SOLICITATION, OFFER AI | | 1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 350) | | | | | PATING DO-C9 | | PAGE OF | 22 PAGE | | |
|--|--|---|---------------------------------------|---------------------------------------|---|---------------------------------------|------------------|---------------------|-----------------|--------------|---------------------------------------|--|
| 2. CONTRACT NO. 3. SOLICITATION NO. | | | 4. TYF | | LICITAT | | 5. DATE IS | | 6. REQUISITI | ON/PURCHASE | 22 PAGES | |
| | N.00170 (| 00 B 14004 | | <u>.</u> | D BID (I TIATED I | | 22.7 | TED 1000 | NO. | 55 1000 | | |
| 7. ISSUED BY | | 99-R-MS01 | X | <u> </u> | | FFER TO <i>(If other</i> | | FEB-1999 | | 57-1000 | -99 | |
| CONTRACTING OFFICER | | | | - | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | inter to the content | snum isc | 7, | | | | |
| NAVAL RESEARCH LABOR | ATORY | | | İ | | | | | | | | |
| ATTN: CODE 3220J.MS | 06 | | | | | | | | | | | |
| WASHINGTON DC 20375-532 | | 0L:44 | | | | | | | | | | |
| NOTE: In sealed bid solicitations "offer" and " | otteror" mean "bid" and | "Didder". | SOLICI | TATIO | N | | | | | | · · · · · · · · · · · · · · · · · · · | |
| 9. Sealed offers in original and 3 | copies for furnishi | ing the supplies | | | | ule will be receive | ed at the | nlace specifie | d in Item 8 | or if | | |
| handcarried, in the depository located in | | BLDG. 222, | | | | | | ocal time 2 | | | | |
| | | | | | | | four) | | (Date) | | | |
| CAUTION - LATE Submissions, Modifications, and Wi | hdrawals: See Section L, P | rovision No. 52.214 | 7 or 52.215-10 |). All of | fors are : | subject to all terms ar | nd condition | ns contained in thi | s solicitation. | | | |
| 10. FOR INFORMATION A. NAM | E | | | | | B. TELEPHONE NO | . (Includ | e area code) | (NO COLL | ECT CALL | S) | |
| CALL: | Ms. 1 | Mary M. Sa | ndy | | | | , | • | 57-3710 | | -, | |
| | | | 11. TABLE O | F CON | TENTS | 1 | | | | | | |
| (✔) SEC. D | ESCRIPTION | | PAGE(S) | (ᢏ) | SEC. | | | DESCRIPTIO | N | | PAGE(S) | |
| | THE SCHEDULE | | 1 . | | | T | | II - CONTRACT C | LAUSES | | | |
| ★ A SOLICITATION/CONTRACT FO ★ B SUPPLIES OR SERVICES AND | | | 1 2 | X | ł | CONTRACT CLA | | HIMENTO EVUIDI | TO AND OTHER | ATTACH | 9-12 | |
| | | | 2 2 | × | J | LIST OF ATTAC | | UMENTS, EXHIBI | 15 AND UTHE | CATTACK. | 13 | |
| X D PACKAGING AND MARKING | THE CHECKET | | 3 | ^ | | | | ESENTATIONS AF | ID INSTRUCTION | ONS | 1 13 | |
| ★ E INSPECTION AND ACCEPTAN | CE | | 3 | V | ,, | REPRESENTATI | ONS, CER | RTIFICATIONS A | ND | | | |
| X C DESCRIPTION/SPECS./WORK X D PACKAGING AND MARXING X E INSPECTION AND ACCEPTAN X F DELIVERIES OR PERFORMANC | E | | 3-4 | × | K | OTHER STATEM | | | | | 14 | |
| ★ G CONTRACT ADMINISTRATION | I DAT a | | 4-7 | X | L | INSTRS., COND | S., AND I | NOTICES TO OF | FERORS | | 15-21 | |
| ★ H SPECIAL CONTRACT REQUIRE | MENTS | | 8 | X | M | EVALUATION F | ACTORS F | OR AWARD | | | 21-22 | |
| NOTE: Item 12 does not apply if the solicitation | n includes the assuicion | | <i>Must be full)</i> linimum Rid A | • | | <u>'</u> | | | | <u> </u> | | |
| 12. In compliance with the above, the under | | | | ссеріа | | calendar days (60 |) colond | ar days unlas | r a differen | et pariod is | ingomed by the | |
| offeror) from the date for receipt of off | | | | ich pric | | | | | | | | |
| time specified in the schedule. | 110.00 | ALENDAR DAYS | To | O CALE | NDAR DA | 176 | 30 CALE | ADAR DAYS | | | CALENDAR DAYS | |
| 13. DISCOUNT FOR PROMPT PAYMENT (See Section I, Clause No. 52-232- | | acciso and on to | % | | % | | 30 CALENDAR DAYS | | % | | | |
| 14. ACKNOWLEDGMENT OF AMENDMENTS | | AMENDM | ENT NO. | | | DATE | | | IT NO. | | DATE | |
| (The offeror acknowledges receipt ments to the SOLICITATION for of | of a mend - fero rs and | | | | | | | | | | * | |
| related documents numbered and d | ated: | | | | | | | | | | | |
| 15A. NAME | | FACILI | ΤΥ [| 16. NAME AND TITLE (OFFER (Type or p | | | | RSON AUTHORIZE | D TO SIGN | | | |
| AND ADDRESS | | | | | | | φ. μ , | | | | | |
| OF | | | | | | | | | | | | |
| OFFEROR | | | | | | | | | | | | |
| 15B. TELEPHONE NO. (Include area | | K IF REMITTANCE A NT FROM ABOVÉ - E | | 17. SIGNATURE | | | | | | 18. OFF | ER DATE | |
| code) | | RESS IN SCHED <u>ule.</u> | | | | <u> </u> | | | | | | |
| 19. ACCEPTED AS TO ITEMS NUMBERED | 20. A | AWARD | (To be com | | | <i>vernment)</i> Ing and appropria | TION | | | | | |
| 13. ACCEPTED AS TO TEMO HOMBELLES | 20. A | indoit (| | 2 | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | | , | | | | | |
| 22. AUTHORITY FOR USING OTHER THAN FULL AF | D OPEN COMPETI- | | | 1 | | | | | | | | |
| TION: | | | | 23. 3 | SUBMIT | INVOICES TO ADI | DRESS SH | IOWN IN | | ITEM | | |
| 10 U.S.C. 2304(c) () 41 U.S.C. 253(c) (| | | } | | | ies unless other | wise spe | cified) | | <u> </u> | . | |
| 24. ADMINISTERED BY (If other than Item 7) CODE | | | | 25. P | YMENT | WILL BE MADE BY | | | C | ODE | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| 26. NAME OF CONTRACTING OFFICER (Type or) | print) | | | 27. UI | VITED \$1 | TATES OF AMERICA | | | | 28. AWARD | DATE | |
| | | | | | | | | | | | | |
| | | | | | • | (Signature of | Contrac | cting Officer) | | <u> </u> | | |
| IMPORTANT - Award will be made on this Fore | n, or on Standard Form 2 | 26, or by other aut | thorized offici | al writt | en notic | :e | | | | | | |

PART I - THE SCHEDULE SECTION B SUPPLIES OR SERVICES AND PRICES/COSTS

B-1 SUPPLIES/SERVICES AND COSTS

| ITEM NUMBER | SUPPLIES/SERVICES | ESTIMATED COST | FIXED FEE | ESTIMATED COST PLUS FIXED FEE |
|----------------|---|-------------------|--------------|----------------------------------|
| 0001 | The Contractor shall design, develop, and fabricate three prototype electric lightweight power motors in accordance with Section C. | \$ | \$ | \$ |
| 0002 | Data in accordance with Exhibit A (DD 1423) and Enclosure (1) | * NSP | * NSP | * NSP |
| TOTAL EST | COST PLUS FIXED FEE | \$ | \$ | \$ |

^{*} Not Separately Priced

SECTION C DESCRIPTION/SPECIFICATIONS/STATEMENT OF WORK

C-1 STATEMENT OF WORK

The work and services to be performed hereunder shall be subject to the requirements and standards contained in Attachment (1), Statement of Work, with Exhibit A, Contract Data Requirements List, and all other Attachments cited in Section J, which are incorporated by reference into Section C.

SECTION D PACKAGING AND MARKING

D-1 PACKAGING AND MARKING

Preservation, packaging, packing and marking of all deliverable contract line items must conform to normal commercial packing standards to assure safe delivery at destination.

SECTION E INSPECTION AND ACCEPTANCE

E-1 INSPECTION AND ACCEPTANCE CLAUSES INCORPORATED BY REFERENCE:

FAR CLAUSE TITLE

52.246-9 - Inspection Of Research And Development (Short Form) (APR 1984)

DFARS CLAUSE TITLE

252.246-7000 - Material Inspection And Receiving Report (DEC 1991)

E-2 INSPECTION AND ACCEPTANCE

Inspection and acceptance of the final delivery will be accomplished by the Technical Manager (TM) or Contracting Officer Representative (COR) designated in Section G of this contract . Inspection and acceptance will be performed at the Naval Research Laboratory, Washington DC 20375-5320.

SECTION F DELIVERIES OR PERFORMANCE

F-1 DELIVERIES OR PERFORMANCE CLAUSES INCORPORATED BY REFERENCE:

FAR CLAUSE TITLE

52.242-15 - Stop-Work Order (AUG 1989) - Alternate I (APR 1984)

52.247-34 - F.O.B. Destination (NOV 1991)

F-2 PERIOD AND PLACE OF PERFORMANCE

(a) The work under this contract shall commence on date of award and be completed no later than one year thereafter.

(b) The principal place of performance of this contract shall be the contractor's facility located at *

(* To be filled in at time of award)

SECTION G CONTRACT ADMINISTRATION DATA

G-1 PROCURING OFFICE REPRESENTATIVE

In order to expedite administration of the contract, the Administrative Contracting Officer (ACO) will direct inquiries to the appropriate office listed below. Please do not direct routine inquiries to the person listed in Item 20A on Standard Form 26.

Contract Matters- *

Security Matters-*

Safety Matters- *

Patent Matters- *

Release of Data- *

The ACO will forward invention disclosures and reports directly to the Associate Counsel for Patents, Code 3008.2, Naval Research Laboratory, Washington DC 20375-5320. The Associate Counsel for Patents will return the reports along with a recommendation to the Administrative Contracting Officer. The Associate Counsel for Patents will represent the Contracting Officer with regard to invention reporting matters arising under this contract.

(* To be filled in at time of award)

G-2 CONTRACTING OFFICER'S REPRESENTATIVE (COR) - FUNCTIONS AND LIMITATIONS

* is hereby designated the cognizant COR who will represent the Contracting Officer in the administration of technical details within the scope of this contract and inspection and acceptance. The COR is not otherwise authorized to make any representations or commitments of any kind on behalf of the Contracting Officer or the Government. The COR does not have the authority to alter the Contractor's obligations or change the specifications in the contract. If, as a result of technical discussions, it is desirable to alter contract obligations or statements of work, a modification must be issued in writing and signed by the Contracting Officer. The COR is responsible for reviewing the bills and charges submitted by the Contractor and informing the ACO of areas where exceptions are to be taken.

(* To be filled in at time of award)

G-3 ONR 5252.242-9718 - TECHNICAL DIRECTION (DEC 88)

- (a) Performance of the work hereunder is subject to the technical direction of the Scientific Officer/COR designated in this contract or his duly authorized representative. For the purposes of this clause, technical direction includes the following:
 - (1) Direction to the Contractor which shifts work emphasis between work areas or tasks, requires pursuit of certain lines of inquiry, fills in details or otherwise serves to accomplish the objectives described in the statement of work;
 - (2) Guidelines to the Contractor which assist in the interpretation of drawings, specifications or technical portions of work description.
- (b) Technical direction must be within the general scope of work stated in the contract. Technical instructions may not be used to:
 - (1) Assign additional work under the contract
 - (2) Direct a change as defined in the contract clause entitled "Changes";
 - (3) Increase or decrease the estimated contract cost, the fixed fee, or the time required for contract performance; or
 - (4) Change any of the terms, conditions or specifications of the contract.
- (c) The only individual authorized to in any way amend or modify any of the terms of this contract shall be the Contracting Officer. When, in the opinion of the Contractor, any technical instruction calls for effort outside the scope of the contract or inconsistent with this special provision, the Contractor shall notify the Contracting Officer in writing within ten working days after its receipt. The Contractor shall not proceed with the work affected by the technical direction until the Contractor is notified by the Contracting Officer that the technical direction is within the scope of the contract.
- (d) Nothing in the foregoing paragraphs may be construed to excuse the Contractor from performing that portion of work statement which is not affected by the disputed technical instruction.

G-4 SUBCONTRACTORS/CONSULTANTS

- (a) Advance notification or requests for consent pursuant to the contract clause entitled "Subcontracts" (FAR 52.244-2) shall be directed to the cognizant administrative contracting officer (ACO).
- (b) The following subcontractors/consultants have been identified in the Contractor's proposal as necessary for performance of this contract:

Subcontractor/Consultant Name

Estimated Cost

(Paragraph (b) will be included and filled in at time of award if subcontractor/consultants are proposed by the successful offeror)

G-5 NAPS 5252.232-9001 - SUBMISSION OF INVOICES (COST-REIMBURSEMENT, TIME-AND-MATERIALS, LABOR-HOUR, OR FIXED PRICE INCENTIVE (JUL 1992)

- (a) "Invoice" as used in this clause includes contractor requests for interim payments using public vouchers (SF 1034) but does not include contractor requests for progress payments under fixed price incentive contracts.
- (b) The Contractor shall submit invoices and any necessary supporting documentation, in an original and <u>4</u> copies, to the contract auditor at the following address:

(To be filled in at time of award)

unless delivery orders are applicable, in which case invoices will be segregated by individual order and submitted to the address specified in the order. In addition, an information copy shall be submitted to [See Section G for designated COR]. Following verification, the contract auditor will forward the invoice to the designated payment office for payment in the amount determined to be owing, in accordance with the applicable payment (and fee) clause(s) of this contract.

- (c) Invoices requesting interim payments shall be submitted no more than once every two weeks, unless another time period is specified in the Payments clause of this contract. For indefinite delivery type contracts, interim payment invoices shall be submitted no more than once every two weeks for each delivery orders. There shall be a lapse of no more than 30 calendar days between performance and submission of an interim payment invoice.
- (d) In addition to the information identified in the Prompt Payment clause herein, each invoice shall contain the following information, as applicable:
 - (1) Contract line item number (CLIN)
 - (2) Subline item number (SLIN)
 - (3) Accounting Classification Reference Number(ACRN)
 - (4) Payment terms
 - (5) Procuring activity
 - (6) Date supplies provided or services performed
 - (7) Costs incurred and allowable under the contract
 - (8) Vessel (e.g., ship, submarine or other craft) or system for which supply/service is provided
- (e) A DD Form 250, "Material Inspection and Receiving Report",
 - __ is required with each invoice submittal.
 - is required only with the final invoice.
 - X is not required.
- (f) A Certificate of Performance
 - shall be provided with each invoice submittal.
 - X is not required.
- (g) The Contractor's final invoice shall be identified as such, and shall list all other invoices (if any) previously tendered under this contract.
- (h) Cost of performance shall be segregated, accumulated and invoiced to the appropriate ACRN categories to the extent possible. When such segregation of costs by ACRN is

not possible for invoices submitted with CLIN/SLINS with more than one ACRN, an allocation ratio shall be established in the same ratio as the obligations cited in the accounting data so that costs are allocated on a proportional basis.

G-6 PAYMENT OF FIXED FEE (COMPLETION FORM)

The fixed fee set forth in Section B of this contract shall be payable on completion of the work and services required under each CLIN of this contract and their acceptance on behalf of the Government. However, the contractor may bill on each voucher the amount of the fixed fee bearing the same percentage to the amount of cost billed as the total fixed fee bears to the total estimated cost set forth in Section B, subject to the contract clause entitled "Fixed Fee" (FAR 52.216-8). If the fixed fee is reduced pursuant to any clause or requirement of this contract and the reduced fee is less than the sum of all fee payments made to the contractor under this contract, the contractor shall repay the difference to the Government. The total fee paid the contractor shall not exceed the fixed fee set forth in Section B.

G-7 PAYMENT INSTRUCTIONS FOR MULTIPLE ACCOUNTING CLASSIFICATION CITATIONS (COST-REIMBURSEMENT)

The purpose of these instructions is to permit the paying office to charge the accounting classification citations in the contract in a manner that reflects the performance of the contract. These instructions do not create any obligation on the part of the Government or the contractor nor do they in any way alter any obligation created by any other provision of the contract. Invoices should be paid from available ACRNs in the following order:

- (a) ACRNs cited on the contractor's invoice.
- (b) On a proportional basis from any ACRNs assigned to funds which will cancel at the end of the current fiscal year.
- (c) The ACRN assigned to the following line of accounting: 97X4930.NH4A 000 77777 0 000173 2F 000000 N00173Z45000.
- (d) If funds appropriated in more than one fiscal year are allotted to the contract, the ACRN assigned to the oldest allotment of funds.
- (e) On a proportional basis from all ACRNs assigned to allotments of funds appropriated in a single fiscal year.

G-8 ACCOUNTING AND APPROPRIATION DATA

(To be filled in at time of award)

SECTION H SPECIAL CONTRACT REQUIREMENTS

H-1 TYPE OF CONTRACT

(To be filled in at time of award)

H-2 ONR 5252.235-9714 - REPORT PREPARATION (FEB 97)

Scientific or technical reports prepared by the Contractor and deliverable under the terms of this contract will be prepared in accordance with format requirements contained in ANSI/NISO Z39.18-1995, "Scientific and Technical Reports: Elements, Organization, and Design. "[NOTE: ANSI Z39.18 may be obtained from NISO Press Fulfillment Center, P. O. Box 338, Oxon Hill, MD. 20750-0338.Telephone 1-800-282-6476]

(To be filled in at time of award)

H-3 YEAR 2000 COMPLIANT INFORMATION TECHNOLOGY

This requirement applies to information technology (IT) that processes date-related information. All such IT delivered under this contract shall be Year 2000 compliant as defined at FAR 39.002.

H-4 REPRESENTATIONS AND CERTIFICATIONS

The Contractor's completed Representations, Certifications, and Other Statements of Offerors or Respondents is incorporated herein by reference in any resultant award.

PART II - CONTRACT CLAUSES SECTION I CONTRACT CLAUSES

I-1 52.252-2 - CLAUSES INCORPORATED BY REFERENCE (FEB 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available.

Also, the full text of a clause may be accessed electronically at this/these address(es):

http://www.arnet.gov/far

http://heron.nrl.navy.mil/contracts/home.htm

a. FEDERAL ACQUISITION REGULATION CLAUSES

| FAR CLAUSE | |
|---|--|
| 52.202-1 | |
| 52.203-3 | |
| 52.203-5 | |
| 52.203-6 | |
| 52.203-7 | |
| 52-203-8 | |
| 52.203-10 | |
| 52.203-12 | |
| 52.204-4 | |
| 52.209-6 | |
| | |
| 52.211-15 | |
| 52.215-2 | |
| 52.215-8 | |
| 52.215-14 | |
| 52.215-17 | |
| | |
| 52.215-21 | |
| 52.216-7 | |
| 52.216-8 | |
| 52.203-12 52.204-4 52.209-6 52.211-15 52.215-2 52.215-8 52.215-14 52.215-17 52.215-21 52.216-7 | |

| 52.219-4 | - | Notice of Price Evaluation Preference For HUBZone Small Business Concerns (JAN 1999) |
|-----------------------|---|---|
| 50.040.0 | | preference. |
| 52.219-8 52.219-23 | - | Utilization Of Small Business Concerns (JAN 1999) Notice of Price Evaluation Adjustment For Small Disadvantaged Business Concerns (OCT 1998) Offers will be evaluated by adding a factor of 10% |
| | | Offeror elects to waive the adjustment. |
| 52.219-25 | - | Small Disadvantaged Business Participation Program-Disadvantaged Status And Reporting (JAN 1999) |
| 52.222-1 | - | Notice To The Government Of Labor Disputes (FEB 1997) |
| 52.222-2 | - | Payment For Overtime Premiums (JUL 1990) -The Use Of Overtime Is Authorized Under This Contract If The Overtime Premium Does Not Exceed "0" |
| 52.222-3 | - | Convict Labor (AUG 1996) |
| 52.222-21 | - | Prohibition of Segregated Facilities (FEB 1999) |
| 52.222-26 | - | Equal Opportunity (FEB 1999) |
| 52.222-35 | - | Affirmative Action For Disabled Veterans And Veterans Of The Vietnam Era (APR 1998) |
| 52.222-36 | - | Affirmative Action For Workers With Disabilities (JUN 1998) |
| 52.222-37 | - | Employment Reports On Disabled Veterans And Veterans Of The Vietnam Era (APR 1998) |
| 52.223-2 | - | Clean Air And Water (APR 1984) |
| 52.223-6 | - | Drug-Free Workplace (JAN 1997) |
| 52.223-14 | - | Toxic Chemical Release Reporting (OCT 1996) |
| 52.225-11 | - | Restrictions On Certain Foreign Purchases (AUG 1998) |
| 52.227-1 | - | Authorization And Consent (JUL 1995)- Alternate I (APR 1984) |
| 52.227-2 | - | Notice And Assistance Regarding Patent And Copyright Infringement (AUG 1996) |
| 52.227-11 | - | Patent Rights - Retention By The Contractor (Short Form) (JUN 1997) (will be included if the successful offeror is a small business or a non-profit organization) |
| 52.227-12 | _ | Patent Rights - Retention By The Contractor (Long Form) (JAN 1997) |
| 02.222 | | (will be included if the successful offeror is not a small business or a non- |
| | | profit organization) |
| 52.228-7 | _ | Insurance - Liability To Third Persons (MAR 1996) |
| 52.232-17 | - | Interest (JUN 1996) |
| 2.232-20 | - | Limitation Of Cost (APR 1984) (Applicable when the contract or task order is fully funded) |
| 52.232-22 | - | Limitation Of Funds (APR 1984) (Applicable when the contract or task order is not fully funded) |
| 52.232-23 | - | Assignment Of Claims (JAN 1986) Alternate I (APR 1984) |
| 52.232-25 | - | Prompt Payment (JUN 1997) |
| | | |

| - | Disputes (DEC 1998) |
|---|--|
| - | Protest After Award (AUG 1996) - Alternate I (JUN 1985) |
| - | Notice Of Intent To Disallow Costs (APR 1984) |
| - | Bankruptcy (JUL 1995) |
| - | Changes - Cost-Reimbursement (AUG 1987) - Alternate V (APR 1984) |
| - | Change Order Accounting (APR 1984) |
| - | Subcontracts (AUG 1998) - Alternate I (AUG 1998) |
| - | Competition In Subcontracting (DEC 1996) |
| - | Government Property (Cost-Reimbursement, Time-And-Material, Or |
| | Labor-Hour Contracts) (JAN 1986) (DEVIATION) |
| - | Use And Charges (APR 1984) (DEVIATION) |
| - | Limitation Of Liability (FEB 1997) |
| - | Commercial Bill Of Lading Notations (APR 1984) |
| - | Preference For U. S. Flag Carriers (JAN 1997) |
| - | Termination (Cost-Reimbursement) (SEP 1996) |
| - | Excusable Delays (APR 1984) |
| - | Government Supply Sources (APR 1984) |
| - | Computer Generated Forms (JAN 1991) |
| | |

b. DEPARTMENT OF DEFENSE FEDERAL ACQUISITION REGULATION CLAUSES

DFARS CLAUSE TITLE

| <u> IIILE</u> |
|--|
| Contracting Officer's Representative (DEC 1991) |
| Special Prohibition On Employment (JUN 1997) |
| Disclosure of Information (DEC 1991) |
| Control Of Government Personnel Work Product (APR 1992) |
| Required Central Contractor Registration (MAR 1998) |
| Acquisition From Subcontractors Subject To On-Site Inspection Under The Intermediate-Range Nuclear Forces (INF) Treaty (NOV 1995) |
| Subcontracting With Firms That Are Owned Or Controlled By The Government Of A Terrorist Country (MAR 1998) |
| Small, Small Disadvantaged and Women-Owned Small Business Subcontracting Plan (Test Program) (JUN 1997) |
| Preference For Certain Domestic Commodities (JAN 1999) |
| Restriction On Acquisition Of Ball And Roller Bearings (AUG 1998) |
| Restriction On Acquisition Of Forgings (JUN 1997) |
| Secondary Arab Boycott Of Israel (JUN 1992) |
| Antiterrorism/Force Protection Policy For Defense Contractors Outside The United States (JUN 1998) (fill in: Naval Criminal Investigative Service (NCIS), Code 24, telephone, DSN 228-9113 or commercial (202)433-9113) |
| Non Estoppel (OCT 1966) |
| Release Of Past Infringement (AUG 1984) |
| |

252.227-7013 -Rights In Technical Data -- Noncommercial Items (NOV 1995) 252.227-7016 -Rights In Bids or Proposal Information (JUN 1995) 252.227-7026 -Deferred Delivery Of Technical Data Or Computer Software (APR 1988) Technical Data--Withholding Of Payment (OCT 1988) 252.227-7030 -252.227-7034 -Patents--Subcontracts (APR 1984) Declaration Of Technical Data Conformity (JAN 1997) 252.227-7036 -252.227-7037 -Validation Of Restrictive Markings On Technical Data (NOV 1995) Patents--Reporting of Subject Inventions (APR 1990) 252.227-7039 -Supplemental Cost Principles (DEC 1991) 252.231-7000 -Payment By Electronic Funds Transfer (CCR) (JUN 1998) 252.232-7009 -252.235-7010 -Acknowledgment of Support and Disclaimer (MAY 1995) 252.235-7011 -Final Scientific Or Technical Report (MAY 1995) 252.242-7000 -Post Award Conference (DEC 1991) 252.242-7004 -Material Management And Accounting System (SEP 1996) Requests for Equitable Adjustment (MAR 1998) 252.243-7002 -252.245-7001 -Reports of Government Property (MAY 1994) Warranty Of Data (DEC 1991) 252.246-7001 -252.247-7023 -Transportation Of Supplies By Sea (NOV 1995) Notification Of Transportation Of Supplies By Sea (NOV 1995) 252.247-7024 -(will be included if the successful offeror made a negative response to the

I-2 FAR 52.223-11 - OZONE-DEPLETING SUBSTANCES (JUN 1996)

inquiry at DFARS 252.247-7022)

(a) Definitions.

"Ozone-depleting substance", as used in this clause, means any substance designated as Class I by the Environmental Protection Agency (EPA) (40 CFR Part 82), including but not limited to chlorofluorocarbons, halons, carbon tetrachloride, and methyl chloroform; or any substance designated as Class II by EPA (40 CFR Part 82), including but not limited to hydrochlorofluorocarbons.

(b) The Contractor shall label products which contain or are manufactured with ozone-depleting substances in the manner and to the extent required by 42 U.S.C. 7671j (b), (c), and (d) and 40 CFR Part 82, Subpart E, as follows:

"WARNING: Contains (or manufactured with, if applicable) * , a substance(s) which harm(s) public health and environment by destroying ozone in the upper atmosphere."

^{*} The Contractor shall insert the name of the substance(s).

PART III - LIST OF DOCUMENTS, EXHIBITS, AND OTHER ATTACHMENTS SECTION J LIST OF ATTACHMENTS

J-1 Attachment (1) - Statement Of Work – 2 Pages, With Exhibit A - DD Form 1423, Contract Data Requirements And Enclosure (1) - Instructions For Distribution- 2 Pages

PART IV - REPRESENTATIONS AND INSTRUCTIONS SECTION - K REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF OFFERORS OR RESPONDENTS

K-1 Representations, Certifications, and Other Statements of Offerors or Respondents

Each Offeror must submit a completed Representations, Certifications, and Other Statements Of Offerors or Respondents with its proposal which is available electronically in full text at http://heron.nrl.navy.mil/contracts/reps&certs.htm

K-2 FILL IN FOR FAR 52.219-1 - SMALL BUSINESS PROGRAM REPRESENTATIONS (OCT 1998)

The fill in information is as follows:

The standard industrial classification (SIC) code for this acquisition is 8731. The small business size standard is 500 employees.

K-3 COMMERCIAL AND GOVERNMENT ENTITY (CAGE) CODE REPORTING

The Offeror's CAGE Code is {fill-in}____.

See DFARS 252.204-7001 in Section L for procedures on requesting a CAGE Code.

SECTION L INSTRUCTIONS CONDITIONS AND NOTICES TO OFFERORS OR RESPONDENTS

L-1 52.252-1 SOLICITATION PROVISIONS INCORPORATED BY REFERENCE (FEB 1998)

This solicitation incorporates one or more solicitation provisions by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. The offeror is cautioned that the listed provisions may include blocks that must be completed by the offeror and submitted with its quotation or offer. In lieu of submitting the full text of those provisions, the offeror may identify the provision by paragraph identifier and provide the appropriate information with its quotation or offer. Also, the full text of a solicitation provision may be accessed electronically at this/these address(es):

http://www.arnet.gov/far http://heron.nrl.navy.mil/contracts/home.htm

FAR CLAUSE TITLE

| 52.204-6 | - | Data Universal Numbering System (DUNS) Number (APR 1998) |
|-----------|---|---|
| 52.214-34 | - | Submission Of Offers In The English Language (APR 1991) |
| 52.214-35 | - | Submission Of Offers In U.S. Currency (APR 1991) |
| 52.215-1 | - | Instructions to Offerors- Competitive Acquisition (OCT 1997) |
| 52.215-16 | - | Facilities Capital Cost Of Money (OCT 1997) |
| 52.219-24 | - | Small Disadvantaged Business Participation Program - Targets (JAN 1999) |
| 52.252-5 | - | Authorized Deviations in Provisions (APR 1984) |

L-2 FAR 52.211-14 - NOTICE OF PRIORITY RATING FOR NATIONAL DEFENSE USE (SEP 1990)

Any contract awarded as a result of this solicitation will be a \square DX rated order; \boxtimes DO rated order certified for national use under the Defense Priorities and Allocations system (DPAS) (15 CFR 700), and the Contractor will be required to follow all of the requirements of this regulation.

L-3 FAR 52.215-20 REQUIREMENTS FOR COST OR PRICING DATA OR INFORMATION OTHER THAN COST OR PRICING DATA (OCT 1997)ALTERNATE IV (OCT 1997)

- (a) Submission of cost or pricing data is not required.
- (b) Provide information described in Section L-12.

L-4 FAR 52.216-1 - TYPE OF CONTRACT (APR 1984)

The Government contemplates award of a Cost Plus Fixed Fee Completion Form contract resulting from this solicitation.

L-5 FAR 52.233-2 - SERVICE OF PROTEST (AUG 1996)

- (a) Protests, as defined in Section 33.101 of the Federal Acquisition Regulation, that are filed directly with an agency, and copies of any protests that are filed with the General Accounting Office (GAO) shall be served on the Contracting Officer (addressed as follows) by obtaining written and dated acknowledgment of receipt from the Control Desk, Code 3200, Bldg. 222, Rm. 115, Naval Research Laboratory, 4555 Overlook Ave., S.W., Washington DC 20375-5326.
- (b) The copy of any protest shall be received in the office designated above within one day of filing a protest with the GAO.

L-6 DFARS 252.204-7001 - COMMERCIAL AND GOVERNMENT ENTITY (CAGE) CODE REPORTING (DEC 1991)

- (a) The Offeror is requested to enter its CAGE code on its offer in the block with its name and address. The CAGE code entered must be for that name and address. Enter CAGE Before the number.
- (b) If the Offeror does not have a CAGE code, it may ask the Contracting Officer to request one from the Defense Logistics Services Center (DLSC). The Contracting Officer will-
 - (1) Ask the Contractor to complete section B of a DD Form 2051, Request for Assignment of the Commercial and Government Entity (CAGE) Code;
 - (2) Complete section A and forward the form to DLSC; and
 - (3) Notify the Contractor of its assigned CAGE code.
- (c) Do not delay submission of the offer pending receipt of a CAGE code.

L-7 DFARS 252.227-7017 - IDENTIFICATION AND ASSERTION OF USE, RELEASE, OR DISCLOSURE RESTRICTIONS (JUN 1995)

- (a) The terms used in this provision are defined in following clause or clauses contained in this solicitation--
 - (1) If a successful offeror will be required to deliver technical data, the Rights in Technical Data--Noncommercial Items clause, or, if this solicitation contemplates a contract under the Small Business Innovative Research Program, the Rights in Noncommercial Technical Data and Computer Software--Small Business Innovative Research (SBIR) Program clause.
 - (2) If a successful offeror will not be required to deliver technical data, the Rights in Noncommercial Computer Software and Noncommercial Computer Software Documentation clause, or, if this solicitation contemplates a contract under the Small Business Innovative Research Program, the Rights in Noncommercial

Technical Data and Computer Software--Small Business Innovative Research (SBIR) Program clause.

- (b) The identification and assertion requirements in this provision apply only to technical data, including computer software documents, or computer software to be delivered with other than unlimited rights. For contracts to be awarded under the Small Business Innovative Research Program, the notification requirements do not apply to technical data or computer software that will be generated under the resulting contract. Notification and identification is not required for restrictions based solely on copyright.
- (c) Offers submitted in response to this solicitation shall identify, to the extent known at the time an offer is submitted to the Government, the technical data or computer software that the Offeror, its subcontractors or suppliers, or potential subcontractors or suppliers, assert should be furnished to the Government with restrictions on use, release, or disclosure.
- (d) The Offeror's assertions, including the assertions of its subcontractors or suppliers or potential subcontractors or suppliers shall be submitted as an attachment to its offer in the following format, dated and signed by an official authorized to contractually obligate the Offeror:

Identification and Assertion of Restrictions on the Government's Use, Release, or Disclosure of Technical Data or Computer Software.

The Offeror asserts for itself, or the persons identified below, that the Government's rights to use, release, or disclose the following technical data or computer software should be restricted:

| Technical Data or Computer Software Person | | Asserted | Name of |
|--|--|-----------------------|-----------|
| to be Furnished With Restrictions* | Basis for Assertion** Restrictions**** | Rights Category*** | Asserting |
| (LIST)****. | (LIST) | (LIST) | (LIST) |

- * For technical data (other than computer software documentation) pertaining to items, components, or processes developed at private expense, identify both the deliverable technical data and each such items, component, or process. For computer software or computer software documentation identify the software or documentation.
- ** Generally, development at private expense, either exclusively or partially, is the only basis for asserting restrictions. For technical data, other than computer software documentation, development refers to development of the item, component, or process to which the data pertain. The Government's rights in computer software documentation generally may not be restricted. For computer

- software, development refers to the software. Indicate whether development was accomplished exclusively or partially at private expense. If development was not accomplished at private expense, or for computer software documentation, enter the specific basis for asserting restrictions.
- *** Enter asserted rights category (e.g., government purpose license rights from a prior contract, rights in SBIR data generated under another contract, limited, restricted, or government purpose rights under this or a prior contract, or specially negotiated licenses).
- **** Corporation, individual, or other person, as appropriate.
- ***** Enter "none" when all data or software will be submitted without restrictions.

| Date | |
|------------------------|---------------------------------------|
| Printed Name and Title | |
| | |
| | |
| Signature | (End of identification and assertion) |

(e) An offeror's failure to submit, complete, or sign the notification and identification required by paragraph (d) of this provision with its offer may render the offer ineligible

for award.

(f) If the Offeror is awarded a contract, the assertions identified in paragraph (d) of this provision shall be listed in an attachment to that contract. Upon request by the Contracting Officer, the Offeror shall provide sufficient information to enable the Contracting Officer to evaluate any listed assertion.

L-8 GOVERNMENT-FURNISHED PROPERTY

No material, labor, or facilities will be furnished by the Government unless provided for in the solicitation.

L-9 INQUIRIES CONCERNING THE RFP

Any questions concerning the RFP must be submitted in writing to the Contracting Officer at the location noted in blocks 7 and 9 of the Standard Form 33, "Solicitation, Offer and Award," no less than fifteen (15) days before closing. The Government will not consider questions received after this date. Offerors are cautioned against directing any questions concerning this RFP to technical personnel at the Naval Research Laboratory.

L-10 INSTRUCTIONS FOR SUBMISSION AND INFORMATION REQUIRED TO EVALUATE PROPOSALS

- (1) Information for the technical/management proposal shall be placed in Volume I and be completely separate from the business proposal (Volume II).
- (2) Proposal Identification/Mailing The proposal should be packaged for delivery so as to permit safe and timely arrival at destination. The proposal package should be sent to the address shown in Block 7 of the RFP face page and marked:

Solicitation No. N00173-99-R-MS01 Closing Date: 29 MAR 1999 (As specified in Block 9, RFP face page) Attn: Code 3220J.MS

(3) Proposal Format and Length - No attempt is made to restrict the proposal format and style. However, the proposal should be written and organized so as to be compatible with the RFP, the Statement of Work, company's organization and accounting structure, and proposed cost estimate. Offerors are encouraged to use recycled paper and maximize the use of double sided copying when preparing responses to solicitations.

L-11 VOLUME I - TECHNICAL/MANAGEMENT PROPOSAL

REQUIRED COPIES: 1 ORIGINAL AND 5 COPIES.

- (1) Include a matrix indicating proposed labor hours by skill category required to perform the statement of work. This matrix shall not contain labor rates or any other indication of price.
 - (2) The following information is required for evaluation of your technical/management:
- (a) Provide details of the proposed design and/or technical approach. Address feasibility. Briefly, address technical risks anticipated. Explain how the product you propose will satisfy the specifications in the Statement of Work.
- (b) Explain your understanding of the design and /or technical approach. What needs to be done, anticipated problems and risks other then those addressed above, potential solutions, potential tradeoffs, facilities, etc. A program milestone chart, which includes a detailed list of task and subtasks with duration of same, must be provided.
- (c) Describe your experience and expertise (including subcontractor(s) in the design and fabrication of custom lightweight, low-voltage electric motors (including reduction gearing and motor controller). This should include a listing of several recent commercial or Department of Defense or other Government contracts under which you have furnished similar products;

include names and telephone numbers of customers and technical personnel involved in the contracts.

PAST PERFORMANCE INFORMATION

- (a) Offerors shall submit the following information as part of their proposal. (Offerors are encouraged to submit the information prior to other parts of the proposal to assist the government in reducing the length of the evaluation period.) List the last three contracts or subcontracts completed during the past three years for services similar in nature to this requirement. Include in the three any current contracts or subcontracts for similar services that were awarded at least one year prior to the date of this solicitation. Offerors that have no similar previous or current contracts should provide the requested information for proposed subcontractors that will perform major or critical aspects of the requirement or for the proposed project manager or key personnel responsible for major or critical aspects of the requirement.
 - 1. Name of contracting organization.
 - 2. Contract number
 - 3. Contract type
 - 4. Total contract value
 - 5. Description of the contract work
 - 6. Contracting officer and telephone number
 - 7. Contracting officer's representative, program manager, or similar official and telephone number
- (b) Offerors shall contact the contracting organizations identified pursuant to paragraph (a) as soon as possible and request them to send past performance information on the identified contracts to the address in Block 7 of the face page of this solicitation. The past performance report which is available electronically in full text at http://heron.nrl.navy.mil/contracts/home.htm is to be provided to the contracting organization for this purpose. If the contracting organization has already collected past performance information on the contract pursuant to FAR Subpart 42.15, the format used to collect the information may be used instead of the past performance report.
- (c) Offerors may include in their proposals specific information relating to problems encountered in performing the identified contracts and any corrective actions by the offeror. Offerors should not provide general information on their performance on the identified contracts as this will be obtained from the contracting organizations.

L-12 VOLUME II - BUSINESS PROPOSAL

REQUIRED COPIES: 1 ORIGINAL AND 5 COPIES

(1) COST PROPOSAL

The offeror shall submit a business proposal that includes a cost proposal with supporting information for each cost element consistent with offeror's cost accounting

system. The supporting breakdown should include such elements as materials, direct labor, indirect cost, and other costs such as travel. The offeror shall provide exhibits as necessary to substantiate the cost elements. Should rates be used in the proposal which are not DCAA approved, the offeror shall provide complete documentation and the rationale for their use at time of proposal submission.

SECTION M EVALUATION FACTORS FOR AWARD

M-1 EVALUATION

Award will be made to that offeror whose proposal is determined to be the best value to the Government, proposed cost and other factors considered. The Government reserves the right to make award to other than the low offeror. Although technical considerations are more important than the cost factor, the closer the technical scores of the various proposals are to one another, the more important the business considerations become.

M-2 EVALUATION FACTORS FOR AWARD

Proposals will be evaluated in accordance with the following criteria. The technical factor is more important than the cost factor. The first technical factor is more important than the second, third, and forth factor. The second and third factor are of the same importance and more important than the forth factor.

M-2-1. TECHNICAL/MANAGEMENT

- (1) **Feasibility of design or technical approach:** The feasibility of the offeror's proposed design or technical approach will be evaluated, including technical risk. There will be a strong preference for a pencil shape for the motor, scores for offeror's with a pancake design will be reduced.
- (2) **Technical Understanding:** Each offeror will be evaluated on its understanding of its design or technical approach (grasp of what needs to be done, awareness of specific problems and risks, awareness of potential solutions, awareness of potential tradeoffs, etc.)
- (3) **Technical Expertise and Experience:** Each offeror will be evaluated on its (including subcontractor's) expertise and experience in the design and fabrication of custom lightweight, low voltage electric motors (including reduction gearing and motor controller)
- (4) **Past performance** will be evaluated on the basis of the quality of the work performed, timeliness of performance, cost control, and business relations. The evaluation will be based

on the information provided pursuant to Section L and other sources if available. Offerors that have no relevant performance history or for which past performance information is not available will not be evaluated favorably or unfavorably on past performance. The government may begin proposal evaluation prior to receipt of past performance information. If, after completion of proposal evaluation except evaluation of past performance, the contracting officer determines that evaluation of past performance will not affect the outcome of competitive selection, the contracting officer may waive its evaluation in accordance with FAR 15.304(c)(3)(iii).

M-2-2 COST TO THE GOVERNMENT

Proposed estimated cost to the Government. The Government may adjust the proposed cost for purposes of evaluation based upon an evaluation of cost realism. Cost Realism means that the costs in an offeror's proposal are realistic for the work to be performed; reflect a clear understanding of the requirements; and are consistent with the various elements of the offeror's technical proposal. The cost realism evaluation includes an analysis of the adequacy of the hours, labor mix, and other direct costs to perform the work as proposed in the technical proposal as well as the proposed labor and indirect rates. It also includes evaluation of the likelihood that the risks inherent in the offeror's technical approach will result in higher actual costs than anticipated.

STATEMENT OF WORK

1.0 Background: Electric Propulsion for Micro Air Vehicles

The Naval Research Laboratory (NRL) has a 6.2 program for the investigation of Micro Air Vehicles (MAVs), and is focusing on electric powered, propeller driven vehicles. MAVs are expected to have masses of 50 to 100 grams and wingspans of 15 to 20 centimeters. Twin motor configurations may be necessary for torque cancellation, and may also be operated differentially for yaw. Due to vehicle weight constraints, the motors must be lightweight, as specified below, and must operate on low voltage to minimize the required number (and weight) of battery cells. Flight times of 5 to 10 minutes are expected for initial prototypes, with eventual flight times of one hour or more desired.

2.0 Electric Motor Development

The contractor shall design, develop, and fabricate an electric powered motor to the following specifications:

- a) Motor mass, m_m , including reduction gearing and motor controller: $m_m \le 6$ grams
- b) Design point output power: $P_{design} \ge 2$ watts at system efficiency, $\eta_m \ge 80\%$
- c) Maximum continuous output power: $P_{max} \ge 4$ watts
- d) Operating voltage, V_{op} ≤ 6 volts DC
- e) Design point operating speed, $\Omega_{op} = 5,000 \text{ rpm}$
- f) Proportional speed control compatible with model hobby, radio-control pulse-width signal (4.8 volts)
- g) Reversible direction of shaft rotation

3.0 Program Design Review

The contractor shall present the motor design to NRL for approval prior to beginning fabrication.

4.0 Motor Testing

The contractor shall provide motor testing to verify performance of prototype motors prior to delivery.

- 5.0 Deliverables
- 5.1 Quarterly Progress Reports

Deliverables include quarterly letter-format progress reports.

5.2 Final Report (Rough Draft)

A rough draft of the final report must be delivered at the completion of the contract. The rough draft will be edited by NRL and returned to the contractor with specific requests for additional information to be added to the report as necessary.

5.3 Final Report

A final report will be written by the contractor from the edited rough draft and delivered to NRL within 30 days of receiving the edited rough draft.

5.4 Hardware Deliverables

Three prototype electric motors (with any associated gearing and motor controllers) meeting the specifications identified in section 2.0 will be delivered to NRL upon completion of the contract

CONTRACT DATA REQUIREMENTS LIST

Form Approved

OMB No. 0704-0188 Public reporting burden for this collection of information is estimated to average 440 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Sulte 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503. Please DO NOT RETURN your form to either of these addresses. Send completed form to the Government Issuing Contracting Officer for the Contract/PR No. listed in Black E. C. CATEGORY: B. EXHIBIT A. CONTRACT LINE ITEM NO. 0002 OTHER D. SYSTEM / ITEM E. CONTRACT / PR NO. F. CONTRACTOR N00173-99-R-MS01 1. DATA ITEM NO. | 2. TITLE OF DATA ITEM 3. SUBTITLE 17. PRICE GROUP Quarterly Progress - Letter Report 4. AUTHORITY (Data Acquisition Document No.) 5. CONTRACT REFERENCE 6. REQUIRING OFFICE 18. ESTIMATED TOTAL PRICE S.O.W 5.1 Code 5712.3 7. DD 250 REQ 9. DIST STATEMENT 10. FREQUENCY 12. DATE OF FIRST SUBMISSION 14. DISTRIBUTION REQUIRED NO **QTRLY** 90 DAC b. COPIES 8. APP CODE 11. AS OF DATE 13. DATE OF SUBSEQUENT a. ADDRESSEE Draft Repro N Rea See Distribution 16. REMARKS 15. TOTAL 17. PRICE GROUP 1. DATA ITEM NO. 2. TITLE OF DATA ITEM 3. SUBTITLE Final Report (Rough Draft)

15. CONTRACT REFERENCE A002 4. AUTHORITY (Data Acquisition Document No.) 6. REQUIRING OFFICE 18. ESTIMATED TOTAL PRICE S.O.W 5.2 Code 5712.3 7. DD 250 REQ. 9. DIST STATEMENT 10. FREQUENCY 12. DATE OF FIRST SUBMISSION DISTRIBUTION 14. REQUIRED NO **OTIME** b. COPIES 11. AS OF DATE 13. DATE OF SUBSEQUENT SUBMISSION 8. APP CODE a. ADDRESSEE Draft Reg Repro Se Distribution 16. REMARKS 1. Edited version to be returned by NRL to contractor 2. To include all data (raw and reduced) 30 days prior to contract completion 15. TOTAL 1. DATA ITEM NO. 2. TITLE OF DATA ITEM 17. PRICE GROUP 3. SUBTITLE Final Report 4. AUTHORITY (Data Acquisition Document No.) 5. CONTRACT REFERENCE 6 REQUIRING OFFICE 18. ESTIMATED TOTAL PRICE S.O.W 5.3 Code 5712.3 7. DD 250 REQ 9. DIST STATEMENT 10. FREQUENCY 12. DATE OF FIRST SUBMISSION DISTRIBUTION 14. REQUIRED NO **OTIME** b. COPIES 8. APP CODE 11. AS OF DATE 13. DATE OF SUBSEQUENT SUBMISSION a. ADDRESSEE Draft N Repro Reg See Distribution 16. REMARKS 1. To include edits and all data (raw and reduced) * 30 days after receipt of edits from rough draft. 15. TOTAL 17. PRICE GROUP 1. DATA ITEM NO. 2. TITLE OF DATA ITEM 3. SUBTITLE 4. AUTHORITY (Data Acquisition Document No.) 5. CONTRACT REFERENCE 6. REQUIRING OFFICE 18. ESTIMATED TOTAL PRICE 7. DD 250 REQ. 9. DIST STATEMENT 10. FREQUENCY 12. DATE OF FIRST SUBMISSION 14. DISTRIBUTION REQUIRED b. COPIES 13. DATE OF SUBSEQUENT SUBMISSION 8. APP CODE 11. AS OF DATE a. ADDRESSEE Final 16. REMARKS

DD Form 142β,

Previous editions are obsolete.

I. APPROVED BY

H. DATE

Page of Pages

J. DATE

15. TOTAL

ENCLOSURE (1) TO DD FORM 1423 INSTRUCTIONS FOR DISTRIBUTION

DISTRIBUTION OF TECHNICAL REPORTS

The minimum distribution of **technical reports** and the **final report** submitted in connection with this contract is as follows:

| | DODAAD | NUMBER OF COPIES DODAAD UNCLASSIFIED/ UNCLASSIFIED/LIMITED | | |
|--|--------|--|----------------|--|
| ADDRESSEE | CODE | UNLIMITED | AND CLASSIFIED | |
| COR Naval Research Laboratory | N00173 | 1 | 1 | |
| Code: 4555 Overlook Ave., S.W. Washington, DC 20375-5320 | | | | |
| Administrative Contracting Officer | * | 1 | 1 | |
| Director Naval Research Laboratory ATTN: Code: 5227 4555 Overlook Ave., S.W. Washington, DC 20375-5326 | N00173 | 1 | 1 | |
| Defense Technical Information Center (DTIC) 8725 John J. Kingman Rd. Suite #0944 Fort Belvoir, VA 22060-6218 | S47031 | 4 | 2 | |

DISTRIBUTION OF NON-TECHNICAL REPORTS

The minimum distribution of non-technical reports submitted in connection with this contract is as follows:

| | NUMBER OF COPIES | | | |
|--|------------------|----------------------------|-------------------------------------|--|
| ADDRESSEE | DODAAD CODE | UNCLASSIFIED/ UNLIMITED | UNCLASSIFIED/LIMITED AND CLASSIFIED | |
| COR | N00173 | 1 | 1 | |
| Administrative Contracting Officer (DCMAO) | * | 1 | 1 | |

(*To be filled in at time of award)